

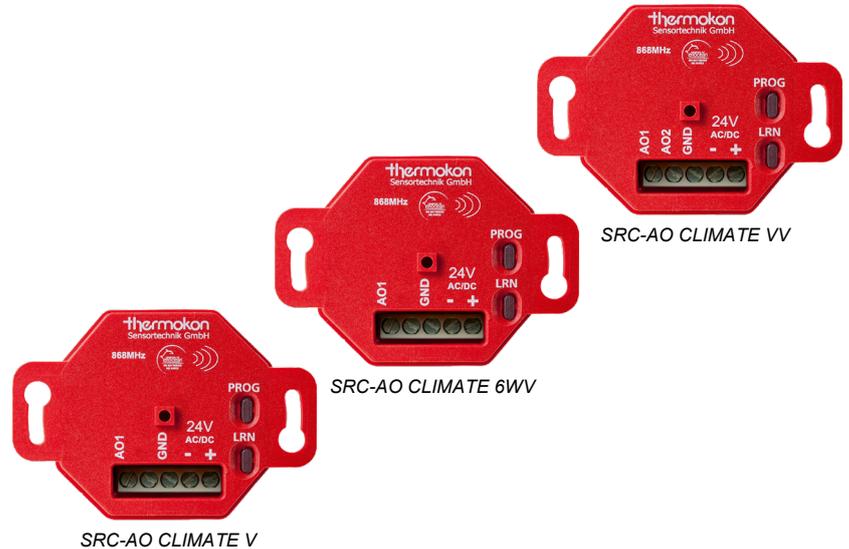
» SRC-AO CLIMATE V | VV | 6WV

EnOcean Wireless Receiver with 1 / 2 analog outputs

thermokon[®]
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration
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» APPLICATION

Unidirectional flush-mounted receiving actuator for room temperature control of proportional heating or cooling valves (type V with 1x 0..10 V), proportional heating and cooling valves (type VV with 2x 0..10 V) or 6-way valves (type 6WV).

» TYPES AVAILABLE

Wireless receiver - 1x analog 0..10 V output
SRC-AO CLIMATE V

Wireless receiver - 2x analog 0..10 V outputs
SRC-AO CLIMATE VV

Wireless receiver - 1x analog 2..10 V output for 6-way valve
SRC-AO CLIMATE 6WV

» SECURITY ADVICE – CAUTION



The installation and assembly of electrical equipment should only be performed by authorized personnel.

The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with

- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

» NOTES ON DISPOSAL



As a component of a large-scale fixed installation, Thermokon products are intended to be used permanently as part of a building or a structure at a pre-defined and dedicated location, hence the Waste Electrical and Electronic Act (WEEE) is not applicable. However, most of the products may contain valuable materials that should be recycled and not disposed of as domestic waste. Please note the relevant regulations for local disposal.

» PRODUCT TESTING AND CERTIFICATION



Declaration of conformity

The declaration of conformity of the products can be found on our website <https://www.thermokon.de/>.

» INFORMATION ABOUT EASYSENS® (RADIO) / AIRCONFIG GENERAL USAGE



EasySens® - airConfig

Basic information about EasySens® radio and about general usage of our airConfig software, please download from our website.

» OVERVIEW OF THE RADIO TELEGRAMS



EEP

The structure of the data contained in the telegram can be found in the EEP (EnOcean equipment profile) list provided by the EnOcean Alliance.

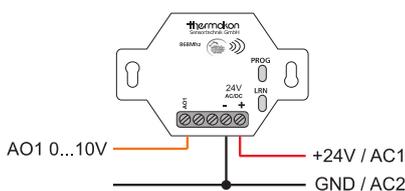
» TECHNICAL DATA

Output voltage	V: 1x 0..10 V, min. load 5 kΩ heating or cooling VV: 2x 0..10 V, min. load 5 kΩ heating and cooling 6WV: 1x 2..10 V, min. Last 5 kΩ 7,3..10 V heating, 2..4,7 V cooling
Radio technology	EnOcean (IEC 14543-3-10), transmission power <10 mW
Frequency	902 MHz, optional 315 MHz
Antenna	internal receiving antenna
Data transmission	Receiver unidirectional
Receiving channels	up to 32 EnOcean transmitters per device
Power supply	15..24 V = (±10%) or 24 V ~ (±10%) SELV
Power consumption	typ. 1 W (24 V =) 1,5 VA (24 V ~)
Functions	V: heating or cooling, VV: heating and cooling, continuously 0..10 V, 6WV: 6-way valve
Enclosure	ABS, red
Protection	IP20 according to EN 60529
Electrical connection	terminal block, max. 16AWG
Ambient condition	-4..+140 °F, max. 85% rH non-condensing
Weight	1.94 oz.
Mounting	flush-mounted in standard EU box (Ø=2.36 in., min. depth=1.77 in.)

» ELECTRICAL CONNECTION

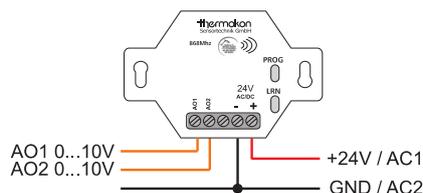
The devices are constructed for the operation of 24V AC/DC (SELV). For the electrical connection, the technical data of the corresponding device are valid. The devices must be operated at a constant supply voltage. When switching the supply voltage on/off, power surges must be avoided on site.

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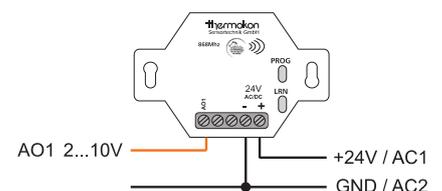
AO1 – Heizen oder Kühlen

SRC-AO CLIMATE VV



AO1 – Kühlen
AO2 - Heizen

SRC-AO CLIMATE 6WV



AO1 – Heizen und Kühlen 6WV

» COMPATIBILITY LIST (OVERVIEW OF THE SUPPORTED RADIO TELEGRAMS (EEP´S)/DEVICES)

A maximum of 32 EnOcean sensors can be taught-in to the device. 1 room control unit + 1 input module for night setback + up to 10 window contacts or window handles can be taught into the actuator per output/channel.

EEP (EnOcean Equipment Profiles)		Device
D5-00-01	single input contact	SRW0x, thanos, SR65 DI
F6-10-00/01	window handle	SRG0x
A5-02-05	temperature 0°C..+40°C	max. 1x room sensor/ operating unit type NOVOS 3 SR, SR04x, SR06x or SR07x
A5-04-01	temperature 0°C..+40°C and humidity 0..100%	
A5-10-01	temperature, set point, fan speed and occupancy control	
A5-10-03	temperature, set point control	
A5-10-04	temperature, set point, fan speed control	
A5-10-05	temperature, set point and occupancy control	
A5-10-06	temperature, set point and day/night control	
A5-10-10	temperature, humidity, set point and occupancy control	
A5-10-11	temperature, humidity, set point and day/night control	
A5-10-12	temperature, humidity and set point	
A5-10-0C	temperature and occupancy control	

» MONTAGE

The module enclosure is prepared for mounting in a standard flush-mounted box with blind cover and cable outlet. No separate external antenna is required for operation. During installation, please ensure that a distance of at least 0.3 m to metallic objects (radiators) is maintained to prevent the radio waves from being cut off and to avoid excessive heat exposure.

» FUNCTION DESCRIPTION

Temperature control:

The thermostat receiver compares the room temperature supplied by the radio sensor with the calculated setpoint (basic setpoint + local setpoint shift). The receiver calculates the setpoint of the room temperature from the set basic setpoint (factory setting 69.8 °F [21°C]) and the setpoint shift set on the radio sensor (factory setting -5K...+5K). The radio sensor sends a radio telegram with the measured values to the receiver according to the transmission setting or at the latest with the heartbeat. In normal operating mode, the reception of a taught-in sensor is indicated on the receiver by the LRN LED lighting up briefly.

If the receiver does not receive a valid radio telegram from the thermostat for a period longer than >90 minutes, the receiver switches to fault mode. The fault is indicated on the receiver by the LRN LED flashing quickly. As soon as a valid radio telegram of the failed sensor is received again, the receiver continues to operate with the normal control function. The manual reset of the fault message is done by switching to the learning mode.

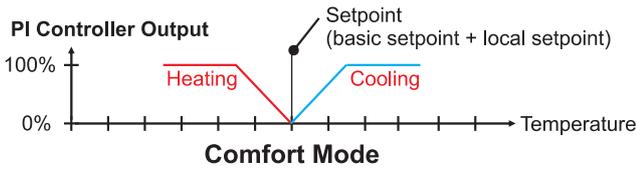
Additional function energy lock:

With the window contact taught in, the thermostat receiver can only activate the outputs if:

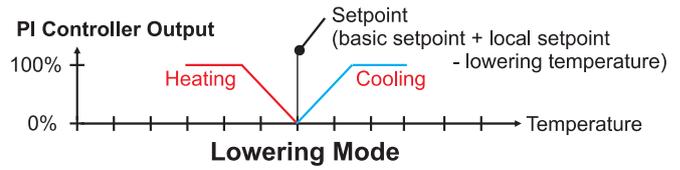
- the information "window closed" is present via the window contact
- there is no signal from the window contact in the last 45 minutes (defective window contact)
- the window contact reports "window open" and the room temperature drops below 8°C (frost protection)

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If the room temperature falls below the setpoint value when parameter 15 "Heating" is selected or exceeds the room temperature when parameter 16 "Cooling" is selected, the output is controlled by the PI controller. The control (0...10V) is analogous to the control value (0...100%).



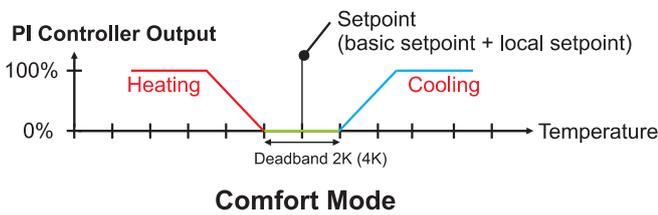
In comfort mode, the setpoint of the controller is composed of the basic setpoint + local offset.



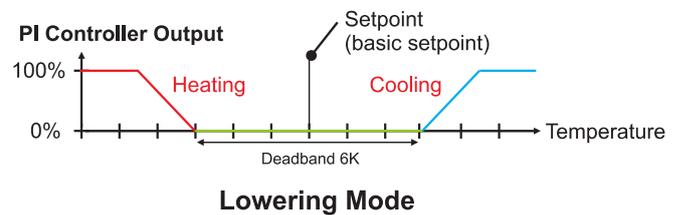
If required, using EEPs A5-10-06 or A5-10-11 (e.g. with an SR04 P MS with slide switch), the actuator can be switched from "Comfort" to "Setback" mode by radio signal. (Position 1 = setback mode, position 0 = comfort mode). In setback mode, the setpoint is made up of the basic setpoint + local setpoint shift - setback temperature.

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If the room temperature falls below the neutral zone, the "heating" output is activated by the PI controller. The control (0...10V) is analogous to the control value (0...100%). In normal operation, the status of the respective active output is signalled by the Prog LED (output active = LED lights up). If the room temperature exceeds the neutral zone, the "cooling" output is activated by the PI controller. If the room temperature is within the neutral zone, both outputs output 0V.



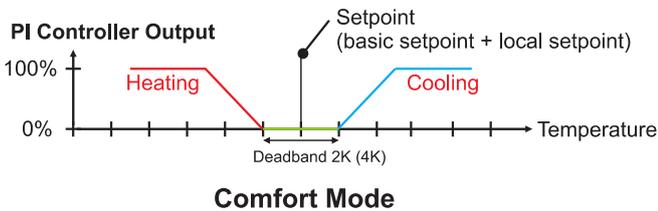
In comfort mode, the setpoint of the controller is composed of the base setpoint + local setpoint shift. The dead zone between heating/cooling is 2K (optionally 4K).



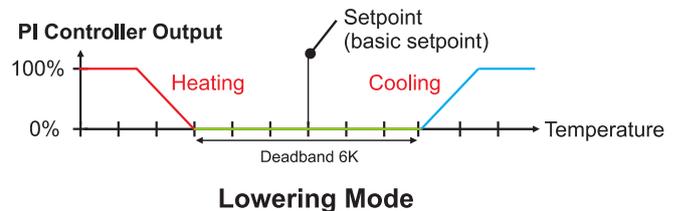
In setback mode, the base setpoint is used as the setpoint of the controller. The dead zone between heating/cooling increases from 2 or 4K to 6K.

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If the room temperature falls below the neutral zone, the output is controlled accordingly for "heating mode" by the PI controller; a voltage of 7.3-10V corresponds to the control value 0-100% heating. If the room temperature exceeds the neutral zone, the output is controlled accordingly for "cooling mode"; a voltage of 2-4.7V corresponds to a control value of 100-0% cooling. If the room temperature is within the dead zone, the output gives 6V.



In comfort mode, the setpoint of the controller is composed of the base setpoint + local setpoint shift. The dead zone between heating/cooling is 2K (optionally 0K or 4K).



In setback mode, the base setpoint is used as the setpoint of the controller. The dead zone between heating/cooling increases to 6K.

» COMMISSIONING

1. Set receiver to learning mode:

Press and hold the LRN button on the receiver. After 2 seconds, the receiver automatically switches to learning mode. This is indicated visually by the LRN LED flashing.

2. Teach-in the radio sensor:

Press the Learn button on the radio sensor (transmitter). The transmitter assignment in the receiver is indicated by 1 continuous flash of the LRN LED for 4 seconds. Then the flashing starts again and up to 10 additional radio window contacts can be taught-in. Only one temperature sensor can be taught-in in the receiver. A new teach-in of another sensor overwrites the ID of the previously taught-in sensor.

3. Exit learning mode:

The receiver's learning mode is automatically exited by pressing the LRN button for longer than 2 seconds or if no button is pressed on the transmitter for 30 seconds. After that, the receiver is ready for operation and uses the measured values supplied by the transmitters.

4. Deleting channels (if required):

Taught-in transmitters can be deleted. To do this, the receiver must be set to learning mode (see 1.) If the button is now pressed on a learned transmitter, the transmitter is unlearned. The deletion of the transmitter is indicated by the LRN LED lighting up continuously for 2 x 4 seconds.

5. Restore delivery state (if required):

Press and hold the LRN button and PROG button on the receiver. After approx. 5 seconds, all taught-in transmitters are deleted from the memory. The deletion of the memory is indicated by the LRN LED and PROG LED lighting up simultaneously.

» CHANGING THE RECEIVER PARAMETERS

The standard parameters can be changed by pressing the PROG-button in the "Learn mode".

For all Types | Parameter 1-9

	Parameter	Description	Factory default
Local set point adjustment <i>1 = if sensor w/o potentiometer is used</i>	1	ignore	disabled
	2	±5 K	enabled
	3	±2,5 K	disabled
Base set point	4	64.4 °F [18 °C]	disabled
	5	66.2 °F [19 °C]	disabled
	6	68.0 °F [20 °C]	disabled
	7	69.8 °F [21 °C]	enabled
	8	71.6 °F [22 °C]	disabled
	9	73.4 °F [23 °C]	disabled

SRC-AO CLIMATE V | Parameter 10-21

	Parameter	Description	Factory default
P-Band/Tn	10	1,5K / 100 Min	enabled
	11	1,5K / 50 Min	disabled
	12	4K / 200 Min	disabled
Setback temperature	13	-2 K	disabled
	14	-4 K	enabled
	15	-6 K	disabled
	16	-12 K	disabled
Controller mode	17	Heating	enabled
	18	Cooling	disabled
In case of sensor failure	19	control variable 50%	enabled
	20	control variable 0%	disabled
	21	last calculated control variable	disabled

SRC-AO CLIMATE VV | Parameter 10-18

	Parameter	Description	Factory default
Deadband in comfort mode	10	2 K	enabled
	11	4 K	disabled
	12	1,5K / 100 Min	enabled
P-Band/Tn	13	1,5K / 50 Min	disabled
	14	4K / 200 Min	disabled
	15	50 % heating	enabled
In case of sensor failure	16	50 % cooling	disabled
	17	0 % heating/cooling	disabled
	18	last calculated control variable	disabled

SRC-AO CLIMATE 6WV | Parameter 10-19

	Parameter	Description	Factory default
Deadband in comfort mode	10	0 K	disabled
	11	2 K	enabled
	12	4 K	disabled
P-Band/Tn	13	1,5K / 100 Min	enabled
	14	1,5K / 50 Min	disabled
	15	4K / 200 Min	disabled
In case of sensor failure	16	50 % heating	enabled
	17	50 % cooling	disabled
	18	0 % heating/cooling	disabled
	19	last calculated control variable	disabled

Example: Change the preset basic setpoint from 69.8 °F [21 °C] to 66.2 °F [19 °C]:

1. Set receiver in "learning mode:

Press the LRN button for longer than 2 seconds.
The receiver switches to the "learning mode". The LRN LED flashes.

2. Set base setpoint to 19 °C.

Press the PROG button 5 times
Receiver acknowledges parameter selection by 5x flashing of the PROG LED.

3. Exit "learning mode":

Press the LRN button for longer than 2 seconds.
The receiver switches to the standard mode. LRN LED off.

4. The changed unit parameters are stored in the unit and are retained even in the event of a power failure.

» DIMENSIONS (IN.)

